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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/786,794

03/08/2001

Julianna H. J. Brooks

BLP:106

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12/07/2005

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EXAMINER

MILLER, ROSE MARY

ART UNIT

PAPER NUMBER

2856

DATE MAILED: 12/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/786,794

Applicant(s)

BROOKS ET AL.

Examiner

Rose M. Miller

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 45-58, 84, 105 and 122-142 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 132 is/are allowed.
- 6) ☒ Claim(s) 45, 46, 52, 55-58, 105, 122, 125-131, 133-136 and 139-141 is/are rejected.
- 7) ☒ Claim(s) 47-51, 53, 54, 123, 124, 137, 138 and 142 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the specification fails to identify the following structures as structures capable of being augmented or disrupted: liver, muscle, feet, kidney, spleen, blood, lung, lens of eye, aqueous humor, vitreous humor, animal cell (only complete animals, not cells targeted), plant cell (again, only plants targeted, not specific cells), molecules, plasma membrane, cytoplasmic inclusion body, basal body, appendages, skin, shell, egg and endoplasmic reticulum.
3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the specification fails to identify the following functions as being augmented by being an organism being placed in acoustic resonance: reproduction, regeneration, embryogenesis, metabolism, germination, and oxidation or reduction activity. This objection can be overcome by pointing out specifically where in the specification the above functions are recited as being augmented.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
5. Claims 55-57 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The originally filed

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specification teaches one to disrupt the following structures instead of augmenting the structures: arthropods, chitins, brain, proteins, cell wall, capsule, spore, pili, flagellum, cement/cement plate, DNA, RNA, lipopolysaccharides, glycolipids, glycoproteins, chloroplasts, mitochondria, endotoxins, exotoxins, proteases, and ligands for host cell receptors. Claim 45, from which all of these claims ultimately depend, recites "augmenting at least one function" of the targeted biologic structure. It is unclear how one augments "proteins", "capsule", "carbohydrates", "glycolipids", "endotoxins", "exotoxins" and many others recited in the long list provided. The definition of "augment" is "to make greater". Applicant has defined augmentation as encompassing "beneficial effects on the biologic structure. Such augmenting of functions or enhancing effecting include but are not limited to enhancement of growth, reproduction, regeneration, embryo-genesis, metabolism, fermentation, and the like." All the original specification teaches is to "disrupt" these structures (see page 9, second paragraph). There is no teaching or understanding on how to "augment" these structures. Furthermore, one of ordinary skill in the art would not know how to "augment" these structures, as it is unclear from the specification and the prior art how these structures would be "augmented" by being placed in acoustic resonance.

6. Claims 55-57 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The originally filed specification teaches one to disrupt the following structures instead of augmenting the structures: arthropods, chitins, brain, proteins, cell wall, capsule, spore, pili, flagellum, cement/cement plate, DNA, RNA, lipopolysaccharides, glycolipids, glycoproteins, chloroplasts, mitochondria, endotoxins, exotoxins, proteases, and ligands for host cell receptors. Claim 45, from which all of these claims ultimately depend, recites "augmenting at least one function" of the targeted biologic structure. It is unclear how one augments "proteins", "capsule", "carbohydrates", "glycolipids", "endotoxins", "exotoxins" and many others recited in the long list provided. The definition of "augment" is "to make greater". Applicant has defined augmentation as encompassing "beneficial effects on the biologic structure. Such augmenting of functions or enhancing effecting include but are not limited to enhancement of growth, reproduction, regeneration, embryo-genesis, metabolism, fermentation,

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and the like." All the original specification teaches is to "disrupt" these structures (see page 9, second paragraph). There is no teaching or understanding on how to "augment" these structures.

7. Claims 122, 126-131, and 133-135 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for utilizing acoustic resonance to augment the growth of an aquatic species, does not reasonably provide enablement for utilizing electromagnetic resonance to augment the growth of an aquatic species. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. These claims merely recite determining a "resonant frequency of said aquatic species". There is no recitation on the type of resonance being determined. It is not until claim 123 that the use of acoustic resonance is claimed.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 125 and 140 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 125 is rejected as being indefinite as the phrase "said contacting" lacks a proper antecedent basis.

Claim 140 is rejected as being indefinite as the phrase "enhancing generation" is unclear. What "generation" is enhanced? From the specification and claim 139, it appears applicant meant to say the germination of the plant was enhanced. For the purposes of applying art, the claim will be treated as if the phrase was --enhancing germination-- instead of the "enhancing generation" now found in the claim.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. As best can be determined at this time, the following rejection is applicable:

12. Claims 45-46, 52, 55, 56, 58, 105, 136, 139, and 141 are rejected under 35

U.S.C. 102(b) as being anticipated by **THOMAS H F A (BE 1010049A3)**.

With regards to claims 45, 46, 52, 55, 56, 58, 105, 136, 139, and 141, **THOMAS H F A** discloses a system/method for augmenting (promoting) at least one function (growth) of a targeted biological structure (tomato plants) by inducing acoustic resonance (ultrasonic resonance) in the biological structure (pollen bearing parts of the plants) by applying at least one resonant frequency (inherent in inducing acoustic resonance) of the biologic structure. **THOMAS H F A** indicates that the selected frequencies have no substantial deleterious effect on nearby, non-resonating structures by indicating the need to utilize different acoustic frequencies to rid the plants of bugs.

Allowable Subject Matter

13. Claims 47-51, 53-54, 84, 123-124, 137-138, and 142 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. Claims 57, 125, and 140 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

15. Claim 132 is allowed.

16. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to teach and/or suggest a method for augmenting the growth of an aquatic species comprising determining at least one first acoustic resonance frequency profile of said aquatic species, applying at least a portion of said first acoustic resonance frequency profile at a sufficient power intensity to cause said augmenting to occur, determining and applying at least one second acoustic resonance profile by substantially repeating the

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determining and applying steps above at a point in time after said aquatic species has grown in size and continuing to repeat the determining and applying steps to achieve additional augmentation of said aquatic species.

Response to Arguments

17. Applicant's arguments, see the Remarks, filed 19 November 2004, with respect to the rejection(s) of claim(s) 45-58, 84, 105, and 122-141 under 103 over **Azure** in view of **Findl** and **Baugh** have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of **THOMAS H F** above.

18. Applicant's arguments filed 19 November 2004 have been fully considered but they are not persuasive.

Applicant argued the following with regards to the 112, second paragraph rejection of claims 55-57, 125, and 140:

"Claims 55-57, 125 and 140 were rejected under Section 112, second paragraph.

Applicants respectfully traverse the rejection of claims 55-57. In particular, all of the biologic structures recited in claims 55-57 perform various functions, all of which are well known in the art. Claim 45, from which claims 55-57 depend, recites augmenting at least one function of a biologic structure. Applicants believe that these claims are definite within the meanings of Section 112, second paragraph."

This argument is insufficient. The Examiner does not agree that these structures are properly "augmented" by being placed into resonance. It is even unclear how they are "augmented" at all. Specifically, it is unclear how placing any of the following: blood, lens of eye, capsule, spore, shell, cement/cement plate, carbohydrates, lipids, lipopolysaccharides, glycolipids, glycoproteins, chloroplasts, endotoxins, and exotoxins, into resonance enhances or produces "beneficial effects" on the biologic structure itself as claimed.

In fact, Applicant's own specification only teaches the "disruption" of most of these structures. There is no teaching of "augmenting" the structures. While one of ordinary skill in the art may know what the "functions" of these structures are, it is not known in the art how these functions are "augmented" by being placed in resonance. If it were known, Applicant would not have a patentable invention.

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As the originally filed specification only teaches "disrupting" the some of the structures recited, and upon review with a senior examiner, the 112, second paragraph rejection of claims 55-57 has been changed to a 112, first paragraph rejection of the claims.

There has also been added an objection to the specification as failing to provide proper antecedent basis for part of the claimed structures as it is unclear where in the specification some of structures recited in claims 55-57 are either "augmented" or "disrupted".

As for claims 125 and 140, Applicant still has failed to correct these issues or even to directly address these issues. Failure to do so in the next response will automatically result in a non-responsive being sent.

Conclusion


19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rose M. Miller whose telephone number is 571-272-2199. The examiner can normally be reached on Monday - Friday, 7:30 am to 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



RMM
2 December 2005



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